PCT

RAW SEQUENCE LISTING   DATE: 07/06/2004
PATENT APPLICATION: US/10/500,240   TIME: 12:24:21

        Input Set : **A:\Gfil02pc.app**
        Output Set: **N:\CRF4\07062004\J500240.raw**

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   3 <110> APPLICANT: GLYCOFI, INC.
   5 <120> TITLE OF INVENTION: METHODS TO ENGINEER MAMMALIAN-TYPE CARBOHYDRATE
   6       STRUCTURES
   8 <130> FILE REFERENCE: GFI/102 PCT
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/500,240
C--> 11 <141> CURRENT FILING DATE: 2004-06-25
  13 <150> PRIOR APPLICATION NUMBER: 60/344,169
  14 <151> PRIOR FILING DATE: 2001-12-27
  16 <160> NUMBER OF SEQ ID NOS: 106
  18 <170> SOFTWARE: PatentIn Ver. 2.1
  20 <210> SEQ ID NO: 1
  21 <211> LENGTH: 35
  22 <212> TYPE: DNA
  23 <213> ORGANISM: Artificial Sequence
  25 <220> FEATURE:
  26 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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  32 <210> SEQ ID NO: 2
  33 <211> LENGTH: 36
  34 <212> TYPE: DNA
  35 <213> ORGANISM: Artificial Sequence
  37 <220> FEATURE:
  38 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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  41 agaatttggt gggtaagaat tccarcacca ytcrtg                         36
  44 <210> SEQ ID NO: 3
  45 <211> LENGTH: 32
  46 <212> TYPE: DNA
  47 <213> ORGANISM: Artificial Sequence
  49 <220> FEATURE:
  50 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
  52 <400> SEQUENCE: 3
  53 cctaagctgg tatgcgttct ctttgccata tc                             32
  56 <210> SEQ ID NO: 4
  57 <211> LENGTH: 30
  58 <212> TYPE: DNA
  59 <213> ORGANISM: Artificial Sequence
  61 <220> FEATURE:
  62 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
  64 <400> SEQUENCE: 4
  65 gcggcataaa caataataga tgctataaag                                30
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p3.6

ENTERED

RAW SEQUENCE LISTING   DATE: 07/06/2004
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Input Set : A:\Gfi102pc.app
Output Set: N:\CRF4\07062004\J500240.raw

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 71 <213> ORGANISM: Artificial Sequence
 73 <220> FEATURE:
 74 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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 77 aattaccct cactaaaggg                                         20
 80 <210> SEQ ID NO: 6
 81 <211> LENGTH: 22
 82 <212> TYPE: DNA
 83 <213> ORGANISM: Artificial Sequence
 85 <220> FEATURE:
 86 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
 88 <400> SEQUENCE: 6
 89 gtaatacgac tcactatagg gc                                     22
 92 <210> SEQ ID NO: 7
 93 <211> LENGTH: 24
 94 <212> TYPE: DNA
 95 <213> ORGANISM: Artificial Sequence
 97 <220> FEATURE:
 98 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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101 ccacatcatc cgtgctacat atag                                   24
104 <210> SEQ ID NO: 8
105 <211> LENGTH: 44
106 <212> TYPE: DNA
107 <213> ORGANISM: Artificial Sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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113 acgaggcaag ctaaacagat ctcgaagtat cgagggttat ccag             44
116 <210> SEQ ID NO: 9
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118 <212> TYPE: DNA
119 <213> ORGANISM: Artificial Sequence
121 <220> FEATURE:
122 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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125 ccatccagtg tcgaaaacga gccaatggtt catgtctata aatc             44
128 <210> SEQ ID NO: 10
129 <211> LENGTH: 24
130 <212> TYPE: DNA
131 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
136 <400> SEQUENCE: 10
137 agcctcagcg ccaacaagcg atgg                                   24
140 <210> SEQ ID NO: 11
141 <211> LENGTH: 44
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142 <212> TYPE: DNA
143 <213> ORGANISM: Artificial Sequence
145 <220> FEATURE:
146 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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152 <210> SEQ ID NO: 12
153 <211> LENGTH: 44
154 <212> TYPE: DNA
155 <213> ORGANISM: Artificial Sequence
157 <220> FEATURE:
158 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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161 gatttataga catgaaccat tggctcgttt tcgacactgg atgg   44
164 <210> SEQ ID NO: 13
165 <211> LENGTH: 20
166 <212> TYPE: DNA
167 <213> ORGANISM: Artificial Sequence
169 <220> FEATURE:
170 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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176 <210> SEQ ID NO: 14
177 <211> LENGTH: 27
178 <212> TYPE: DNA
179 <213> ORGANISM: Artificial Sequence
181 <220> FEATURE:
182 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
184 <400> SEQUENCE: 14
185 ataacagtat gtgttcacacg cgtgtag   27
188 <210> SEQ ID NO: 15
189 <211> LENGTH: 36
190 <212> TYPE: DNA
191 <213> ORGANISM: Artificial Sequence
193 <220> FEATURE:
194 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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197 tcctggcgcg ccttcccgag agaactggcc tccctc   36
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201 <211> LENGTH: 37
202 <212> TYPE: DNA
203 <213> ORGANISM: Artificial Sequence
205 <220> FEATURE:
206 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
208 <400> SEQUENCE: 16
209 aattaattaa ccctagccct ccgctgtatc caacttg   37
212 <210> SEQ ID NO: 17
213 <211> LENGTH: 28
214 <212> TYPE: DNA

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217 <220> FEATURE:
218 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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224 <210> SEQ ID NO: 18
225 <211> LENGTH: 28
226 <212> TYPE: DNA
227 <213> ORGANISM: Artificial Sequence
229 <220> FEATURE:
230 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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233 ctgattgctt atcaacgaga attccttg                              28
236 <210> SEQ ID NO: 19
237 <211> LENGTH: 28
238 <212> TYPE: DNA
239 <213> ORGANISM: Artificial Sequence
241 <220> FEATURE:
242 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
244 <400> SEQUENCE: 19
245 tgttggtttc tcagatgatc agttggtg                              28
248 <210> SEQ ID NO: 20
249 <211> LENGTH: 29
250 <212> TYPE: DNA
251 <213> ORGANISM: Artificial Sequence
253 <220> FEATURE:
254 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
256 <400> SEQUENCE: 20
257 agagagagat ggctttcttt tctccctgg                             29
260 <210> SEQ ID NO: 21
261 <211> LENGTH: 27
262 <212> TYPE: DNA
263 <213> ORGANISM: Artificial Sequence
265 <220> FEATURE:
266 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
268 <400> SEQUENCE: 21
269 aaatcaagtg gatgaaggac atgtggc                               27
272 <210> SEQ ID NO: 22
273 <211> LENGTH: 28
274 <212> TYPE: DNA
275 <213> ORGANISM: Artificial Sequence
277 <220> FEATURE:
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280 <400> SEQUENCE: 22
281 agcgatgcta taggcagtct ttgcagag                              28
284 <210> SEQ ID NO: 23
285 <211> LENGTH: 4
286 <212> TYPE: PRT
287 <213> ORGANISM: Saccharomyces cerevisiae
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Input Set : A:\Gfi102pc.app
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290 His Asp Glu Leu
291   1
294 <210> SEQ ID NO: 24
295 <211> LENGTH: 458
296 <212> TYPE: PRT
297 <213> ORGANISM:. Saccharomyces cerevisiae
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300 <221> NAME/KEY: MOD_RES
301 <222> LOCATION: (304)..(318)
302 <223> OTHER INFORMATION: Variable amino acid
304 <220> FEATURE:
305 <221> NAME/KEY: MOD_RES
306 <222> LOCATION: (416)..(436)
307 <223> OTHER INFORMATION: Variable amino acid
309 <400> SEQUENCE: 24
310 Met Glu Gly Glu Gln Ser Pro Gln Gly Glu Lys Ser Leu Gln Arg Lys
311   1               5                  10                  15
313 Gln Phe Val Arg Pro Pro Leu Asp Leu Trp Gln Asp Leu Lys Asp Gly
314             20                  25                  30
316 Val Arg Tyr Val Ile Phe Asp Cys Arg Ala Asn Leu Ile Val Met Pro
317             35                  40                  45
319 Leu Leu Ile Leu Phe Glu Ser Met Leu Cys Lys Ile Ile Ile Lys Lys
320       50                  55                  60
322 Val Ala Tyr Thr Glu Ile Asp Tyr Lys Ala Tyr Met Glu Gln Ile Glu
323 65                  70                  75                  80
325 Met Ile Gln Leu Asp Gly Met Leu Asp Tyr Ser Gln Val Ser Gly Gly
326                 85                  90                  95
328 Thr Gly Pro Leu Val Tyr Pro Ala Gly His Val Leu Ile Tyr Lys Met
329             . 100                 105                 110
331 Met Tyr Trp Leu Thr Glu Gly Met Asp His Val Glu Arg Gly Gln Val
332             115                 120                 125
334 Phe Phe Arg Tyr Leu Tyr Leu Leu Thr Leu Ala Leu Gln Met Ala Cys
335       130                 135                 140
337 Tyr Tyr Leu Leu His Leu Pro Pro Trp Cys Val Val Leu Ala Cys Leu
338 145                 150                 155                 160
340 Ser Lys Arg Leu His Ser Ile Tyr Val Leu Arg Leu Phe Asn Asp Cys
341             165                 170                 175
343 Phe Thr Thr Leu Phe Met Val Val Thr Val Leu Gly Ala Ile Val Ala
344             180                 185                 190
346 Ser Arg Cys His Gln Arg Pro Lys Leu Lys Lys Ser Leu Ala Leu Val
347             195                 200                 205
349 Ile Ser Ala Thr Tyr Ser Met Ala Val Ser Ile Lys Met Asn Ala Leu
350       210                 215                 220
352 Leu Tyr Phe Pro Ala Met Met Ile Ser Leu Phe Ile Leu Asn Asp Ala
353 225                 230                 235                 240
355 Asn Val Ile Leu Thr Leu Leu Asp Leu Val Ala Met Ile Ala Trp Gln
356                 245                 250                 255
358 Val Ala Val Ala Val Pro Phe Leu Arg Ser Phe Pro Gln Gln Tyr Leu
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 07/06/2004
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Input Set : A:\Gfi102pc.app
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Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:24; Xaa Pos. 304,305,306,307,308,309,310,311,312,313,314,315,316,317
Seq#:24; Xaa Pos. 318,416,417,418,419,420,421,422,423,424,425,426,427,428
Seq#:24; Xaa Pos. 429,430,431,432,433,434,435,436
Seq#:26; Xaa Pos. 333,334,335,336,337,338,339,340,341,342,343,344,345,346
Seq#:26; Xaa Pos. 347
Seq#:36; Xaa Pos. 209,210,211,212,213,214,215,216,217,218,219,220,221,222
Seq#:36; Xaa Pos. 223,235,236,237,238,239,240,241,242,243,244,245,246
Seq#:38; Xaa Pos. 183,184,185,186,187,188,189,190,191,192,193,194,195,196
Seq#:38; Xaa Pos. 197,209,210,211,212,213,214,215,216,217,218,219,220
Seq#:40; Xaa Pos. 176,177,178,179,180,181,182,183,184,185,186,187,188,189
Seq#:40; Xaa Pos. 190,202,203,204,205,206,207,208,209,210,211,212,213
Seq#:42; Xaa Pos. 176,177,178,179,180,181,182,183,184,185,186,187,188,189
Seq#:42; Xaa Pos. 190,202,203,204,205,206,207,208,209,210,211,212,213
Seq#:54; Xaa Pos. 65,66,67,68,69,70,71
Seq#:56; Xaa Pos. 66,67,68,69,70,71,72
Seq#:58; Xaa Pos. 66,67,68,69,70,71,72
Seq#:60; Xaa Pos. 80,81,82,83,84,85,86
Seq#:62; Xaa Pos. 80,81,82,83,84,85,86
Seq#:68; Xaa Pos. 62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80
Seq#:70; Xaa Pos. 43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61
Seq#:72; Xaa Pos. 45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63
Seq#:78; Xaa Pos. 23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,366,367,368
Seq#:78; Xaa Pos. 369,370,371,372,373,374,375,376,377,378
Seq#:80; Xaa Pos. 22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,365,366,367
Seq#:80; Xaa Pos. 368,369,370,371,372,373,374,375,376,377
Seq#:82; Xaa Pos. 329,330,331,332,333,334,335,336,337,338,339,340,341
Seq#:84; Xaa Pos. 324,325,326,327,328,329,330,331,332,333,334,335,336
Seq#:88; Xaa Pos. 116,117,118,119,120,121,122,123,124,125,126,127,271
Seq#:90; Xaa Pos. 116,117,118,119,120,121,122,123,124,125,126,127,271
Seq#:92; Xaa Pos. 88,89,90,91,92,93,94,95,96,97,98,99
Seq#:94; Xaa Pos. 114,115,116,117,118,119,120,121,122,123,124,125

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:104; Line(s) 5298
Seq#:106; Line(s) 5336

VERIFICATION SUMMARY　　　　　　　　　DATE: 07/06/2004
PATENT APPLICATION:　**US/10/500,240**　　TIME: 12:24:22

Input Set : **A:\Gfi102pc.app**
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L:10 M:270 C: Current Application Number differs, Replaced Current Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:288
M:341 Repeated in SeqNo=24
L:563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:320
M:341 Repeated in SeqNo=26
L:1204 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:208
M:341 Repeated in SeqNo=36
L:1378 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:176
M:341 Repeated in SeqNo=38
L:1546 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:160
M:341 Repeated in SeqNo=40
L:1714 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:160
M:341 Repeated in SeqNo=42
L:2242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:64
L:2315 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:64
L:2382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58 after pos.:64
L:2461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60 after pos.:64
M:341 Repeated in SeqNo=60
L:2534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62 after pos.:64
M:341 Repeated in SeqNo=62
L:2826 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:68 after pos.:48
M:341 Repeated in SeqNo=68
L:2935 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:32
M:341 Repeated in SeqNo=70
L:3008 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:32
M:341 Repeated in SeqNo=72
L:3376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78 after pos.:16
M:341 Repeated in SeqNo=78
L:3598 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80 after pos.:16
M:341 Repeated in SeqNo=80
L:3860 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:320
M:341 Repeated in SeqNo=82
L:4053 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:320
L:4298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88 after pos.:112
M:341 Repeated in SeqNo=88
L:4430 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:112
M:341 Repeated in SeqNo=90
L:4545 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92 after pos.:80
M:341 Repeated in SeqNo=92
L:4657 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94 after pos.:112
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